Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

061982

SEP 11 1998

Mr. Steve M. Alexander
Perimeter Areas Section Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336-6018

Dear Mr. Alexander:

STATE ENVIRONMENTAL POLICY ACT (SEPA) CHECKLISTS FOR THE 1301-N AND 1325-N (ATTACHMENT 1), 1324-N AND 1324-NA (ATTACHMENT 2) TREATMENT, STORAGE, AND DISPOSAL (TSD) UNITS

Attached are the SEPA checklists for the 1301-N and 1325-N, 1324-N and 1324-NA, TSD units. The SEPA checklists are being submitted pursuant to Washington Administrative Code 197-11-960.

The Closure Plans for the 1301-N and 1325-N, 1324-N and 1324-NA TSD units were submitted to the State of Washington Department of Ecology (Ecology) for final approval (after the public comment period of these closure plans) and subsequent incorporation into the Hanford Facility Resource Conservation and Recovery Act Permit. Therefore, the SEPA process is required. Because borrow areas have not been identified, the attached SEPA checklists does not address potential impacts caused by the removal of up to 175,000 cubic yards of fill material for the 1301-N and 1325-N TSD units. Furthermore, the checklist does not address potential impacts from fill removal for the 1324-N and 1324-NA TSD units. Impacts from borrow area operations will be considered when these borrow areas have been chosen at a later date. The SEPA checklist recommends continued consultation with Tribes during project design to ensure that Tribal Traditional and Religious use areas and concerns are considered. The U.S. Department of Energy Project Managers will coordinate with the Hanford Site Preservation Officer and tribal representatives to ensure appropriate protection of traditional cultural places.

Please notify the U.S. Department of Energy, Richland Operations Office, of Ecology's determination regarding these checklists. If you want to discuss this matter further or require additional information, please contact Ms. Donna M. Wanek, Project Manager, at 376-5778.

Sincerely,

James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

RAP:DMW

Attachments: As stated

cc w/attachs:
R. Jim, YIN
D. Hanson, OHHP
D. L. Powaukee, NPT
L. Seelatsee, Wanapum
D. R. Sherwood, EPA
P. R. Staats, Ecology
G. Tallent, Ecology
J. R. Wilkinson, CTUIR

cc w/o attachs:
V. R. Dronen, BHI

ATTACHMENT #1

0505677

SUPERSEDES: 0505675

STATE ENVIRONMENTAL POLICY ACT

ENVIRONMENTAL CHECKLIST

FOR

THE HANFORD SITE

1301-N/1325-N LIQUID WASTE DISPOSAL FACILITY
CLOSURE/POST CLOSURE PLAN

0505677

WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST FORMS
(WAC 197-11-960)

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST FOR THE HANFORD SITE
1301-N/1325-N LIQUID WASTE DISPOSAL FACILITY
CLOSURE/POST CLOSURE PLAN

CONTENTS

TO BE COMPLETED BY APPLICANT | EVALUATION FOR AGENCY USE ONLY

A. BACKGROUND

1. **Name of proposed project, if applicable:**

   The name of this proposed project is 1301-N/1325-N Liquid Effluent Disposal Facilities Closure.

2. **Name of applicants:**

   U.S. Department of Energy, Richland Operations Office (DOE-RL)

3. **Address and phone number of applicants and contact persons:**

   U.S. Department of Energy
   Richland Operations Office
   P.O. Box 550
   Richland, Washington 99352

   Contact:

   James E. Rasmussen, Program Manager
   Office of Environmental Assurance,
   Permits, and Policy
   (509) 376-5441

   Donna M. Wanek, Project Manager
   Project Manager
   (509) 376-5778

4. **Date checklist prepared:**

   This SEPA Checklist was prepared concurrently with closure/postclosure plans.

5. **Agency requesting the checklist:**

   Washington State Department of Ecology
   P.O. Box 47600
   Olympia, Washington 98504-7600

6. **Proposed timing or schedule: (including phasing, if applicable):**

   This SEPA Checklist is being submitted concurrently with closure/postclosure plans. Actual closure/postclosure will not occur until post 1999.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   No

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   This SEPA Environmental Checklist is being submitted to Ecology concurrently with closure/post closure plans.

   The Corrective Measure Study (CMS) will include the NEPA values; the closure/post closure plans will be addendums to the CMS. Cultural Resources reviews and Ecological Surveys will be completed for all sites for any action taking place in previously undisturbed areas.

   General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9, December 1997. This document is updated annually by Pacific Northwest Laboratory, and provides current information concerning climate and meteorology; ecology; history and archeology; socioeconomics; land use and noise levels; and geology and hydrology. These baseline data for the Hanford Site and its past activities are useful for evaluating proposed activities and their potential environmental impacts.

9. **Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? if yes, explain.**

   No applications to government agencies are known to be pending for this proposed action.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    The proposed activities will be conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and the *Resource Conservation and Recovery Act of 1976* (RCRA). Actions under CERCLA are exempt from obtaining federal, state, and local permits (CERCLA Section 121[e][1]). The Hanford Facility RCRA Permit will be amended to incorporate the proposed activities; however, consistent with the CERCLA exemption no other permits are being requested. The substantive provisions of applicable or relevant and appropriate requirements (ARARs) - including requirements normally included as permit conditions - must be met

for the proposed activities. Appendix A of the CMS lists the ARARs.

11. **Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.**

Unit descriptions are provided in the response to question B.8.c.

All concrete structures and pipelines will be removed. Removal of the concrete panels for 1301-N trench and 1325-N crib will require a concrete saw to cut the grout used to interlock and seal the panels. Once the panels are free, the panels and beams will be removed with a minimal amount of breakage.

Once all the concrete and piping is removed, remediation can be completed. The first step in all remedial alternatives is to remove the clean overburden. This material will be set aside and used as backfill later. Three remedial alternatives are being considered:

(1) **Removal Alternative**: If the selected remedial alternative is to remove (excavate), treat if required, and then dispose of the contaminated soils in an approved disposal facility, contaminated soils would be excavated until the unit is clean according to the established Corrective Action Levels. Any contaminated soils requiring treatment to meet landfill acceptance criteria would be segregated and treated. All contaminated soils would then be shipped to an approved disposal facility. The unit will be backfilled with the clean overburden material and supplemented with clean borrow material from a near by borrow pit. The site will then be contoured to blend with the surrounding terrain and in a manner that will reduce surface runon/runoff in order to prevent soil erosion.

(2) **Capping Alternative:** If the alternative selected is capping, an RCRA approved cover will be built over the unit. First, the contaminants in soil to 3 m (10 ft) below ground surface will be removed from the units. They will then be backfilled with the clean overburden and supplemented with fill from a nearby borrow pit. This will provide a level consistent surface for the cover. Next, the cover will be constructed according to the required design specifications. Finally, the cover will be revegetated and a maintenance and monitoring program implemented.

(3) **Vitrification Alternative**: If in situ treatment (vitrification) is the selected remedial alternative, the contaminated soils to 3 m (10 ft) below ground surface will be removed. The contaminated soils below 3 m (10 ft) will be solidified using in situ

vitrification. After the solidification process is complete the excavation will be backfilled with the clean overburden material and supplemented with clean fill material from a near by borrow pit. The site will then be contoured to blend with the surrounding terrain and in a manner that will reduce surface runon/runoff in order to prevent soil erosion. A monitoring program, if required will be implemented.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The 1301-N and 1325-N units are located in the 100-N Area of the Hanford Site. The 1301-N unit is located approximately 180 meters northeast of the 100-N Reactor, and the 1325-N Unit is located approximately 550 northeast of the 100-N Reactor. The 1301-N unit is located within 14N 26E Section 28 of the Coyote Rapids, Washington, Quadrangle Map, Willamette Principle Meridian. The 1325-N unit is located within 14N, 26E Section 28 of the Coyote Rapids Washington, Quadrangle Map, Willamette Principle Meridian.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. **General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.**

Generally flat with small rolling hills which do not usually exceed 3.0 - 4.6 m (10-15 ft).

b. **What is the steepest slope on the site (approximate percent slope)?**

The approximate slope of the land at the proposed project is less than 2 percent with slopes up to 100 percent on the sides of the small rolling hills.

c. **What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

The soil types in the 100 Area and around the proposed project consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific 100 Area soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9 December 1997. Farming is not permitted on the Benton County portion of the Hanford Site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

For all remedial alternatives, the units will be backfilled to surrounding grade with the clean overburden soils removed during remediation and supplemented with fill material from a nearby Hanford Site borrow pit. This fill material would be comprised of the same basaltic sandy gravel in which the units are constructed. It is anticipated the fill material would have the same general composition and particle size distribution as the overburden and the soils surrounding the units as a result of having the same depositional environment. The fill would be used to restore the terrain to its approximate original configuration and to reduce runon/runoff and prevent soil erosion. It is estimated that 165,000 cubic yards of fill material will be required for removal of 10 ft of surface soils in order to meet a recreational exposure scenario and 175,000 cubic yards of fill material for removal of 15 ft of surface soils in order to meet a residential exposure scenario.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

The surface, once backfilling is completed, will be contoured and revegetated to reduce runon/runoff which will help prevent soil erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

None

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The finished grade and the areas disturbed during activities would be stabilized on completion of this effort, while dust would be controlled by standard construction techniques (e.g., water sprays, crusting agents).

2. Air

   a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.**

      All three alternatives may create minor amounts of exhaust and dust (some of which might be contaminated) by vehicles and construction personnel during this project. Potential radiological and nonradiological emissions could occur during the in situ vitrification alternative. Heavy equipment and trucks transporting material from the facility will generate dust and gaseous (exhaust) emissions. If the selected remedy is removal, vehicular traffic would cease on completion. If vitrification or capping is implemented, automobile exhaust will be generated as a result of monitoring and maintenance activities. There is a potential for dust emissions from the removal of the concrete panels. Removal will require either cutting or breaking the panels which could result in dust generation.

   b. **Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.**

      No.

   c. **Proposed measures to reduce or control emissions or other impacts to the air, if any?**

      In order to reduce the amount of dust generated during closure activities, dust suppressants (e.g., water, crusting agents) will be used as necessary. If vitrification is the alternative selected, the best available controls technology will be used. Near-field air emissions monitors will be used for all three alternatives.

3. Water

   a. **Surface**

1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

   At the closest point, the 1301-N and 1325-N units are approximately 180 m (590 ft) from the Columbia River, the nearest natural watercourse.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

   No.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   None.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

   No.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   The proposed activities are not within the 100- or 500-year floodplains as described in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9, December 1997.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No.

b. Ground

1) **Will ground water be withdrawn, or will water be discharged to ground**

water? Give general description, purpose, and approximate quantities if known.

No groundwater would be withdrawn in support of this project, and water would not be discharged to the aquifer. In the vicinity of the proposed action, the depth to groundwater is approximately 19.8 meters (65 ft).

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Does not apply.

c. **Water Run-off (including storm water)**

1) **Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The Hanford Site has a semi-arid climate averaging 15 - 18 cm (6 to 7 in.) of annual precipitation. Any precipitation that occurs at the site seeps into the soil on or near the site. Consequently, none would enter any surface waters.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**

Contaminants from these waste sites are currently in the groundwater beneath the sites. Remediation of the site will result in no further migration of contaminants to the groundwater. Contaminants already in vadose zone soils below the maximum water table may continue to be released to the groundwater and eventually the Columbia River.

d. **Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:**

Post-closure leaching of contaminated subsoils by surface water will be prevented by: removal of contaminated soils; the installation of a barrier (the final cover)

designed to preclude the migration of surface water to underlying contaminated soils; or in situ vitrification of any contaminated soils remaining.

4. **Plants**

a. **Check or circle the types of vegetation found on the site.**

_ **deciduous tree: alder, maple, aspen, other**
_ **evergreen tree: fir, cedar, pine, other**
_ **shrubs**
X **grass**
_ **pasture**
_ **crop or grain**
_ **wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other**
_ **water plants: water lily, eelgrass, milfoil, other**
X **other types of vegetation** (Sagebrush)

b. **What kind and amount of vegetation will be removed or altered?**

Sites are cobble and clear of vegetation. The nearby areas are dominated by cheatgrass, which may be disturbed with closure activities. All areas denuded of vegetation as a result of this project will be revegetated appropriately.

c. **List threatened or endangered species known to be on or near the site.**

There are no threatened or endangered plants known to be on or adjacent to the site. however, an updated biological survey in the general vicinity of the proposed project would be conducted before construction.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

The surface will be regraded to reduce runon/runoff which will help prevent control erosion then revegeated with perennial grass species well suited to the local climate.

5. **Animals**

a. **Indicate (by underlining) any birds and animals which have been observed on or near the site or are known to be on or near the site:**

birds: hawk, heron, eagle, songbirds, other:.....
mammals: deer, bear, elk, beaver, other:.....
fish: bass, salmon, trout, herring, shellfish, other:.....

Raptors (burrowing owls, ferruginous, redtail, and Swainson's hawks) are seen occasionally in the 100 Area. Small passerines (sparrows, starlings, finches) also may be present in the general vicinity. Mule deer, rabbits, badgers, and coyotes occasionally are seen in the general area.

b. List any threatened or endangered species known to be on or near the site.

Two federal listed threatened or endangered species have been identified on the 560 square mile (1,450 square kilometer) Hanford Site along the Columbia River; the bald eagle and peregrine falcon. In addition, the state listed white pelican, sandhill crane, and ferruginous hawk also occur on or migrate through the Hanford Site. However, since this proposed action does not disturb any natural habitat and there are no known nesting or roosting locations near the project site, none of these species will be impacted by the proposed activities.

c. Is the site part of a migration route? If so, explain.

The Hanford Site is a part of the broad migratory waterfowl Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any:

The project specific Environmental Survey will indicate any necessary measures. However, because of the lack of habitat, few adverse impacts requiring preservation measures are anticipated. Revegetation after closure will enhance habitat for the future.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Postclosure monitoring activities will require the use of petroleum products to power motor vehicles.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

None.

7. **Environmental Health**

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

All three alternatives may create minor amounts of exhaust and dust (some of which might be contaminated) by vehicles and construction activities during this project. Potential radiological and nonradiological emissions could occur during the vitrification alternative. Heavy equipment and trucks transporting material from the facility will generate dust and gaseous (exhaust) emissions.

1) **Describe special emergency services that might be required.**

Hanford Site security, fire response, and ambulance services are on call at all times in the event of an onsite emergency. Hanford Site emergency services personnel are specially trained to manage a variety of circumstances involving chemical and/or radioactive constituents and situations.

2) **Proposed measures to reduce or control environmental health hazards, if any:**

Stringent administrative controls and engineered barriers would be employed to minimize the probability of even a minor incident and/or accident.

b. Noise

1) **What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?**

All three alternatives would create a minor amount of traffic and equipment noise in the vicinity, although it is not expected to affect personnel that would be working at the proposed sites.

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

All three alternatives would create some amount of noise from grading and excavation equipment and would cease upon completion.

3) **Proposed measures to reduce or control noise impacts, if any:**

Noise impacts to the surrounding environmental is not anticipated. If Occupational Safety and Health Administration noise standards are exceeded, appropriate measures to protect workers would be employed.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The proposed activities are part of the U.S. Government-owned Hanford Site, which is used for the management of waste associated with the cleanup from past and/or present production of special nuclear materials, and for energy research. Past activities at 100-N Area include a nuclear reactor and a commercial power generating station which have been shut down since 1987. Current activities include remediation of waste sites and groundwater as well as decommissioning and demolition of buildings.

b. Has the site been used for agriculture? If so, describe.

No portion of the 100 Area on the Hanford Site has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

The 1301-N and 1325-N Liquid Waste Disposal Facilities are each comprised of two structures: a rectangular crib and a long trench coming off the crib. The 1301-N crib

is approximately 88 m by 38 m (290 ft by 125 ft) and averages 3.7 (12 ft) deep. The crib is filled with at least three different layers of boulders and rocks to a thickness varying between 2.1 m to 3.4 m (7 ft to 11 ft). A weir box measuring 16 m long by 3.7 m wide by 3 m deep (52 ft by 12 ft by 10 ft) sits in the southern portion of the crib. The weir box is constructed of 0.3 m (12 in) thick reinforced concrete and is open on top. Several pipelines, including a 0.9 m (36 in) diameter line, come into the weir box and two 0.9 m (36 in) diameter pipelines come out of the weir box which go to 1325-N. Some pipelines are buried while others are on the surface.

The north end of the crib exits into the french portion of the unit. The trench is a zigzag structure measuring 490 m (1,600 ft) long by 3 m (10 ft) wide on the bottom by 3.7 m (12 ft) deep. The trench has 1.5 to 1.0 (run to rise) sloped sides with a top width of approximately 14 m (46 ft). The trench is covered with precast concrete panels supported on concrete beams running across the trench.

The 1325-N crib measures 76 m by 73 m (250 ft by 240 ft) and is 1.8 m (6 ft) deep. The crib is covered with precast concrete panels supported by precast concrete beams resting on foundations positioned at regular intervals throughout the interior of the crib. Under the crib cover, between the beams and foundations is the effluent distribution system. This is a system of concrete troughs that distributed the effluent equally throughout the crib. The effluent is delivered to the crib through a 0.9 m (36 in.) diameter pipeline which comes from the 1301-N weir box.

The 1325-N trench runs to the northeast away from the crib and is connected to the crib by two concrete conduits, one from the north corner of the crib and one from the east corner. The conduits join together in a common weir box which exits into the trench. The trench is 914 m (3000 ft) long by 7.6 m (25 ft) wide on the bottom. The sides slope up at 1.5 to 1.0 (run to rise). The trench is covered with precast concrete panels 2.7 m (9 ft) above the bottom of the trench. The panels are 16.8 m (55 ft) long and extend across the trench and rest on concrete foundations running the full length of the trench.

A total of approximately 1280 m (4,200 ft) of pipelines are associated with the 1301-N and 1325-N units. Both 1301-N and 1325-N are surrounded by 2.4 m (8 ft) chain link fences.

d. Will any structures be demolished? If so, what?

All concrete structures and pipelines will be removed and disposed in an approved disposal facility. The fence will be removed and disposed of also.

e. What is the current zoning classification of the site?

The Hanford Site is zoned as an Unclassified Use (U) district by Benton County.

f. What is the current comprehensive plan designation of the site?

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the "Hanford Reservation". Under this designation, land on the Hanford Site may be used for "activities nuclear in nature". Non-nuclear activities are authorized "if and when DOE approval for such activities is obtained". Future land use has not been determined. Land use alternatives are presented in the *Draft Hanford Remedial Action EIS*, which was issued for public review in 1996, and a second draft of the EIS will be issued for public review in 1998.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

No additional staff would be added as a result of the proposed activities.

j. Approximately how many people would the completed project displace?

Minimal

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposed project would remediate existing contamination and be compatible with future land use alternatives under consideration.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

If the alternative selected is capping, installation of an earthen cover will be required. The cover, as designed, will have a maximum height of approximately 5 m (16.4 ft). The chain link perimeter fence may attain a height of 3 m (10 ft) Other alternatives would not alter any views.

c. Proposed measures to reduce or control aesthetic impacts, if any:

If the selected alternative is removal or vitrification, the site would be regraded to contour. The site would be revegetated for all remedial alternatives.

11. Light and Glare

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

None.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

No.

c. **What existing off-site sources of light or glare may affect your proposal?**

None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**

None.

12. Recreation

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

Fishing and boating on the Columbia River.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?**

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

At this time, no places or objects are listed on any national, state, or local register of historic places. However, *Mooli Mooli* is considered eligible for listing on the National Register of Historic Places as a Traditional Cultural Place within the proposed Hanford Site Archaeological District.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A Cultural Resources Review of the 1301-N and 1325-N project areas was conducted in 1995 by ERC cultural resources staff (HCRC #95-100-039). Their review cited a survey conducted by staff of the Hanford Cultural Resources Laboratory which concluded that "although the project area is located within 400 meters of the Columbia River, the ground has been so heavily disturbed that it is very unlikely that any archaeological materials exist there" (HCRC #95-100-022). Archaeological sites are located southwest of the trenches along the Columbia River shoreline and across the river. While these reviews were conducted in support of site characterization studies and a Pump and Treat project respectively, the area considered encompasses that proposed for remedial action.

As indicated above, the 1301-N and 1325-N units are situated in a culturally sensitive location. The knobs and kettles south and east of the area are known to the Wanapum as "*Mooli Mooli*" (Little Stacked Hills). They mark the general location for fall salmon fishing. More importantly, the mounds are a place of spiritual power. Surveys by Hanford archaeologists have recorded rock cairns on some of these hills indicating use of the area by native peoples.

The 100-NR-1 Treatment, Storage and Disposal Units Corrective Measures Study/Closure Plan (CMS) and Proposed Plans were presented to representatives of the Native American community at the January 20, 1998 Cultural Issues Meeting. The 1301-N and 1325-N units are contained within the CMS. Follow-up discussions on the remedial actions being considered under the CMS were held with the Tribes at the April 21 Cultural Issues Meeting. Concerns were raised at both meetings that remediation should take into account the religious sensitivity of the area within which these units are situated. Actions should be confined to previously disturbed areas. To

ensure protection of *Mooli Mooli*, the Tribes will assist the project design team in siting the support facilities and infrastructure required to complete the remedial action.

The clean gravel required to backfill these units following remediation will be obtained from existing, permitted pits. Should the footprint of these pits need to be enlarged, a cultural resources review of the proposed expansion area(s) will be conducted by qualified site personnel.

c. Proposed measures to reduce or control impacts, if any:

The 1301-N and 1325-N units are located in areas that are heavily disturbed as a result of construction of these and other features in the area such as roads and wells. Project activities will be restricted to disturbed areas, thereby eliminating risks to cultural resources. Any need to locate project activities in undisturbed locations will be subjected to the cultural review process to ensure that cultural resources are identified and adequate measures are designed for their avoidance or mitigation. As part of the review process, the Native American community will be informed of the proposed action and asked for their comments. The review will also be filed with the State Historic Preservation Officer and other regulators as appropriate. Workers in all areas will be directed to watch for cultural material during all work activities.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The 100 Area is not served by public streets or highways.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The proposed activities are not accessible to the public and is not served by public transit.

c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

No.

e. **Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No.

f. **How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

None.

g. **Proposed measures to reduce or control transportation impacts, if any:**

None.

15. Public Services

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No.

b. **Proposed measures to reduce or control direct impacts on public services, if any:**

None.

16. Utilities

a. **Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:**

The only utility currently available at the site is fresh water.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

A portable air supply for pneumatically operated equipment and a portable electrical generator will be necessary for closure operations. Water trucks may be available onsite to periodically spray the area, reducing airborne particles generated during remediation activities. After closure, the only utility necessary for operation will be portable electrical generators for powering groundwater monitoring well pumps during inspection and sampling.

General construction activities are outlined in the answer to checklist question A.11.

C. SIGNATURES

The above answers are true and complete to the best of my knowledge. We understand that the lead agency is relying on them to make its decision.

James E. Rasmussen, Program Manager
Office of Environmental Assurance,
Permits, and Policy
U.S. Department of Energy
Richland Operations Office

Date

ATTACHMENT #2

0505678

SUPERSEDES: 0505676

STATE ENVIRONMENTAL POLICY ACT

ENVIRONMENTAL CHECKLIST

FOR

THE HANFORD SITE

1324-N SURFACE IMPOUNDMENT AND
1324-NA PERCOLATION POND
CLOSURE/POSTCLOSURE PLAN

0505678

WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST FORMS
(WAC 197-11-960)

STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST FOR THE HANFORD SITE
1324-N SURFACE IMPOUNDMENT AND
1324-NA PERCOLATION POND
CLOSURE/POSTCLOSURE PLAN

CONTENTS

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

A. BACKGROUND

1. **Name of proposed project, if applicable:**

   The name of this proposed project is the 1324-N/1324-NA Liquid Effluent Disposal Facilities Closure.

2. **Name of applicants:**

   U.S. Department of Energy, Richland Operations Office (DOE-RL)

3. **Address and phone number of applicants and contact persons:**

   U.S. Department of Energy
   Richland Operations Office
   P.O. Box 550
   Richland, Washington 99352

   Contact:

   James E. Rasmussen, Program Manager
   Office of Environmental Assurance,
   Permits, and Policy
   (509) 376-5441

   Donna M. Wanek,
   Project Manager
   (509) 376-5778

4. **Date checklist prepared:**

   This SEPA checklist was prepared concurrently with the closure/postclosure plans.

5. **Agency requesting the checklist:**

   Washington State Department of Ecology
   P.O. Box 47600
   Olympia, Washington 98504-7600

6. **Proposed timing or schedule (including phasing, if applicable):**

   This SEPA Checklist is being submitted concurrently with closure/postclosure plans. Actual closure/postclosure will not occur until post 1999.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   No

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   This SEPA Environmental Checklist is being submitted to Ecology concurrently with closure/postclosure plans.

   The Corrective Measure Study (CMS) will include the NEPA values; the closure/post closure plans will be addendums to the CMS. Cultural Resources reviews and Ecological Surveys will be completed for all sites for any action taking place in previously undisturbed areas.

   General information concerning the Hanford Facility environment can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9, December 1997. This document is updated annually by Pacific Northwest Laboratory, and provides current information concerning climate and meteorology; ecology; history and archeology; socioeconomics; land use and noise levels; and geology and hydrology. These baseline data for the Hanford Site and its past activities are useful for evaluating proposed activities and their potential environmental impacts.

9. **Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? if yes, explain.**

   No applications to government agencies are known to be pending for this proposed action.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    The proposed activities will be conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and the *Resource Conservation and Recovery Act of 1976* (RCRA). Actions under CERCLA are exempt from obtaining federal, state, and local permits (CERCLA Section 121[e][1]). The Hanford Facility RCRA Permit will be amended to incorporate the proposed activities; however, consistent with the CERCLA exemption no other permits are being requested. The substantive provisions of applicable or relevant and appropriate requirements (ARARs) - including requirements normally included as permit conditions - must be met

for the proposed activities. Appendix A of the CMS lists the ARARs.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Unit descriptions are provided in the response to question B.8.c.

Two samples will be taken along the North fence line. Results of the sampling effort will be used to assess whether clean closure can be achieved with no further sampling. If further sampling is not required, closure activities will begin. If further sampling is required, a Sampling and Analysis Plan will be developed to ensure clean closure.

All structures (see B.8.c and B.8.d) will also be removed and disposed of in an approved landfill. The unit will be backfilled with clean borrow material from a nearby borrow pit. The site will then be contoured to blend with the surrounding terrain in a manner that will reduce surface runon/runoff in order to prevent soil erosion

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 1324-N/NA units are located in the 100-N Area of the Hanford Site 160 meters southeast of 100-N Reactor. Maps and plans are included in the main body of this corrective measures study. The units are located within 14N, 26E, Section 28 of the Coyote Rapids, Washington, Quadrangle Map, Willamette Principle Meridian.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_____.

Flat.

b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land at the proposed project is less than 2 percent.

c. What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The soil types in the 100 Area and around the proposed project consist mainly of eolian and fluvial sands and gravel. More detailed information concerning specific 100 Area soil classifications can be found in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9, December 1997. Farming is not permitted on the Benton County portion of the Hanford Site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

The units will be backfilled with material from a nearby borrow pit. This fill material would be comprised of the same basaltic sandy gravel in which the ponds are constructed. It is anticipated the fill material would have the same general composition and particle size distribution as the soils surrounding the units as a result of having the same depositional environment. The fill would be used to restore the terrain to its approximate original configuration and to reduce runon/runoff and prevent soil erosion.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

The surface, once backfilling is completed, will be contoured and revegetated to reduce runon/runoff, and these actions will help prevent soil erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

None

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The finished grade and the areas disturbed during activities would be stabilized on completion of this effort, while dust would be controlled by standard construction techniques (e.g., water sprays, crusting agents, etc.).

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.

Minor amounts of exhaust and dust would be generated by vehicles and construction personnel during this project. On completion, vehicular traffic would cease supporting this action.

b. Are there any off-site sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to the air, if any?

In order to reduce the amount of dust generated during closure activities, dust suppressants (e.g., water, crusting agents) will be used as necessary. Near-field air emission monitors will be used during closure activities.

3. Water

a. Surface

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The 1324-N and 1324-NA are approximately 400 m (1300 ft) from the Columbia River, the nearest natural watercourse.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

No.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

None.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The proposed activities are within the 100-or 500-year floodplains as described in the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, Revision 9, December 1997.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No.

b. **Ground**

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No groundwater would be withdrawn in support of this project, and water would not be discharged to the aquifer. In the vicinity of the proposed action, the depth to groundwater is approximately 19.8 m (65 ft).

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Does not apply.

c. **Water Run-off (including storm water)**

1) **Describe the source of run-off (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The Hanford Site has a semi-arid climate and averages 15 to 18 cm (6 to 7 in.) of annual precipitation. Any precipitation that occurs at the site seeps into the soil on or near the site. Consequently, none would enter any surface waters.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**

There are no remaining contaminants within the vadose zone that can migrate to groundwater. A plume caused by contaminants from these sites currently exists in the groundwater beneath the sites. Remediation is not required to prevent further contamination of the groundwater.

d. **Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:**

The disposal of surface drainage from storm water and snow melt is through natural percolation. Finished grading of the site would provide both run-on and run-off control to prevent possible flooding.

4. **Plants**

a. **Check or circle the types of vegetation found on the site.**

_ **deciduous tree: alder, maple, aspen, other**
_ **evergreen tree: fir, cedar, pine, other**
_ **shrubs**
X **grass**
_ **pasture**
_ **crop or grain**
_ **wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other**
_ **water plants: water lily, eelgrass, milfoil, other**
X **other types of vegetation** (sagebrush)

b. **What kind and amount of vegetation will be removed or altered?**

Sites are cobble and clear of vegetation. The nearby areas are dominated by cheatgrass, which may be disturbed with closure activities. All areas denuded of vegetation as a result of this project will be revegetated appropriately.

c. **List threatened or endangered species known to be on or near the site.**

There are no threatened or endangered plants known to be on or adjacent to the site; however, an updated biological survey in the general vicinity of the proposed project would be conducted before construction.

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

The surface will be regraded then revegetated with perennial grass species well suited to the local climate to reduce runon/runoff which will help prevent soil erosion.

5. **Animals**

a. **Indicate (by underlining) any birds and animals which have been observed on or near the site or are known to be on or near the site:**

birds: hawk, heron, eagle, songbirds, other:.....
mammals: deer, bear, elk, beaver, other:.....
fish: bass, salmon, trout, herring, shellfish, other:.....

Raptors (burrowing owls, ferruginous, redtail, and Swainson's hawks) are seen occasionally in the 100 Area. Small passerines (sparrows, starlings, finches) also may be present in the general vicinity. Mule deer, rabbits, badgers, and coyotes occasionally are seen in the general area.

b. List any threatened or endangered species known to be on or near the site.

Two federal and state listed threatened or endangered species have been identified on the 560 square mile (1,450 square kilometer) Hanford Site along the Columbia River: the bald eagle and peregrine falcon. In addition, the state listed white pelican, sandhill crane, and ferruginous hawk also occur on or migrate through the Hanford Site. However, since this proposed action does not disturb any natural habitat, and there are no known nesting or roosting locations near the project site, none of these species will be impacted by the proposed activities.

c. Is the site part of a migration route? If so, explain.

The Hanford Site is a part of the broad migratory waterfowl Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any:

The project-specific Environmental Survey will indicate any necessary measures. However, because of the lack of habitat, few adverse impacts requiring preservation measures are anticipated. Revegetation after closure will enhance habitat for the future.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Postclosure monitoring activities will require the use of petroleum products to power motor vehicles.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

None.

7. **Environmental Health**

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

The closure activities may create minor amounts of exhaust and dust by vehicles and construction equipment.

1) **Describe special emergency services that might be required.**

Hanford Site security, fire response, and ambulance services are on call at all times in the event of an on-site emergency. Hanford Site emergency services personnel are specially trained to manage a variety of circumstances involving chemical and/or radioactive constituents and situations.

2) **Proposed measures to reduce or control environmental health hazards, if any:**

Stringent administrative controls and engineered barriers would be employed to minimize the probability of even a minor incident and/or accident.

b. **Noise**

1) **What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?**

While there is a minor amount of traffic, operation, and equipment noise in the vicinity, it is not expected to affect personnel at the proposed sites.

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Some amount of noise from grading equipment and construction would occur normally from 6 a.m. to 6 p.m. during a work day and would cease upon completion.

3) **Proposed measures to reduce or control noise impacts, if any:**

Noise impacts to the surrounding environment of the 1324-N and 1324-NA areas is not anticipated. If Occupational Safety and Health Administration noise standards are exceeded, appropriate measures to protect workers would be employed.

8. **Land and Shoreline Use**

a. **What is the current use of the site and adjacent properties?**

The proposed activities are part of the U.S. Government-owned Hanford Site, which is used for the management of waste associated with the cleanup from past and/or present production of special nuclear materials, and for energy research. Commercial activities on the Hanford Site include a nuclear power plant and a Washington State administered low-level burial area operated by U.S. Ecology.

b. **Has the site been used for agriculture? If so, describe.**

No portion of the 100 Area on the Hanford Site has been used for agricultural purposes since 1943.

c. **Describe any structures on the site.**

The 1324-NA unit is an unlined percolation pond approximately 4.5 m (15 ft) deep with a capacity of approximately 11.4 million L (3 million gal). The 1324-N unit is a double lined surface impoundment with a leak detection system. It measures approximately 4.5 m (15 ft) deep and has a capacity of approximately 1.6 million L (424,000 gal). Also addressed in this closure plan are the North and South Settling Ponds, the surface areas surrounding all these ponds where fines dredged from the settling ponds may have been deposited, and the pipelines associated with the units.

The South Settling Pond has been backfilled to grade and the 1324-N Surface Impoundment was built within the North Settling Pond. There are several pipelines, both surface and buried, connecting the ponds and an abandoned sample building approximately 3 m by 3 m (10 ft by 10 ft). In addition, there are approximately 400 m (1,300 ft) of underground pipelines coming from the demineralization plant that discharged to these ponds. The site is bounded on all sides by a 2.4 m (8 ft) high chain link fence.

d. Will any structures be demolished? If so, what?

The double liner and leak detection system in the 1324-N Surface Impoundment will be removed. All pipelines, both surface and underground, will be removed, as will the sample building. The fence will also be taken down.

e. What is the current zoning classification of the site?

The Hanford Site is zoned as an Unclassified Use (U) district by Benton County.

f. What is the current comprehensive plan designation of the site?

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the "Hanford Reservation." Under this designation, land on the Hanford Site may be used for "activities nuclear in nature." Non-nuclear activities are authorized "if and when DOE approval for such activities is obtained." Future land use has not been determined. Land use alternatives are presented in the *Draft Hanford Remedial Action EIS,* which was issued for public review in 1996, and a second draft of the EIS will be issued for public review in 1998.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

No additional staff would be added as a result of the proposed activities.

j. **Approximately how many people would the completed project displace?**

Minimal.

k. **Proposed measures to avoid or reduce displacement impacts, if any:**

Does not apply.

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The proposed project would remediate existing contamination and be compatible with future land use alternatives under consideration.

9. **Housing**

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

None.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

None.

c. **Proposed measures to reduce or control housing impacts, if any:**

Does not apply.

10. **Aesthetics**

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

Does not apply.

b. **What views in the immediate vicinity would be altered or obstructed?**

None.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

None.

11. **Light and Glare**

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

None.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

No.

c. **What existing off-site sources of light or glare may affect your proposal?**

None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**

None.

12. **Recreation**

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

Fishing and boating on the Columbia River.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

At this time, no places or objects are listed on any national, state, or local register of historic places. However, *Mooli Mooli* is considered eligible for listing on the National Register of Historic Places as a Traditional Cultural Place within the proposed Hanford Site Archaeological District.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A Cultural Resources Review of the 1324 N/NA project area was conducted in 1989 by staff of the Hanford Cultural Resources Laboratory. Their review concluded that "no cultural properties are known to be located onsite. The closest recorded archaeological site is located 450 m to the west...the proposed actions will have no impact on any historic property" (HCRC #89-100-005). Additional archaeological sites are located across the Columbia River. While this review was conducted in support of site characterization studies, the area considered encompasses that proposed for remedial action.

As indicated above, the 1324 N/NA units are situated in a culturally sensitive location. The knobs and kettles south and east of the area are known to the Wanapum as "*Mooli Mooli*" (Little Stacked Hills). They mark the general location for fall salmon fishing. More importantly, the mounds are a place of spiritual power. Surveys by Hanford archaeologists have recorded rock cairns on some of these hills indicating use of the area by native peoples.

The 100-NR-1 Treatment, Storage and Disposal Units Corrective Measures Study/Closure Plan (CMS) and Proposed Plans were presented to representatives of the Native American community at the January 20, 1998 Cultural Issues Meeting. The 1324 N/NA units are contained within the CMS. Follow-up discussions on the remedial actions being considered under the CMS were held with the Tribes at the

April 21 Cultural Issues Meeting. No comments were made regarding these units.

The clean gravel required to backfill these units following remediation will be obtained from existing, permitted pits. Should the footprint of these pits need to be enlarged, a cultural resources review of the proposed expansion area(s) will be conducted by qualified site personnel.

c. **Proposed measures to reduce or control impacts, if any:**

The 1324 N/NA units are located in areas that are heavily disturbed as a result of construction of the N-Area facilities. Project activities will be restricted to disturbed areas, thereby eliminating risks to cultural resources. Any need to locate project activities in undisturbed locations will be subjected to the cultural review process to ensure that cultural resources are identified and adequate measures are designed for their avoidance or mitigation. As part of the review process, the Native American community will be informed of the proposed action and asked for their comments. The review will also be filed with the State Historic Preservation Officer and other regulators as appropriate. Workers in all areas will be directed to watch for cultural material during all work activities.

14. Transportation

a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

The 100 Area is not served by public streets or highways.

b. **Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

The proposed activities are not accessible to the public, and the site is not served by public transit.

c. **How many parking spaces would the completed project have? How many would the project eliminate?**

None.

service, and the general construction activities on the site or in the immediate vicinity which might be needed.

A portable air supply for pneumatically operated equipment and a portable electrical generator will be necessary for closure operations. Water trucks may be available on site to periodically spray the area, thereby reducing airborne particles generated during remediation activities. After closure, the only utility necessary for operation will be portable electrical generators for powering groundwater monitoring well pumps during inspection and sampling.

General construction activities are outlined in the answer to checklist question A.ll.

C. SIGNATURES

The above answers are true and complete to the best of my knowledge. We understand that the lead agency is relying on them to make its decision.

James E. Rasmussen, Program Manager
Office of Environmental Assurance,
Permits, and Policy
U.S. Department of Energy,
Richland Operations Office

Date